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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,084	12/30/2003	Thomas Conrad	30691/MEY5103	6871

4743 7590 07/11/2006

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EXAMINER

SAMPLE, DAVID R

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/748,084	CONRAD ET AL.	
	Examiner	Art Unit	
	David Sample	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30 and 32-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20060616;20060310</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Any rejections and/or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Information Disclosure Statement

The information disclosure statements filed March 10, 2006 and June 16, 2006 fail to comply with 37 CFR 1.97(c) because they lack a statement as specified in 37 CFR 1.97(e) or the fee as set forth in 37 CFR 1.17(p). They have been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 103

Claim 30, 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Angeletakis et al. (US 2002/0193462).

Angeletakis et al. discloses a product employed for dental products which includes a ceramic filler having a bimodal particle size distribution. See the abstract. The course powder has a particle size of 0.05-0.5 μm , and the fine powder has an average particle size of less than 100 nm. *Id.* The composite includes 5-12 vol.% fine powder, and the course particles are employed in an amount of 10-70 vol.%. See page 6, claim 1. These ranges overlap the presently claimed ranges. Overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

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The reference does not disclose the ratio of average particle sizes. However, the course and fine fractions have overlapping ranges with the ranges recited in the present claims, and within these ranges are encompassed the recited ratio of average particle sizes. For example, a ceramic having a course fraction of 0.5 μm and fine fraction of 25 nm will have a ratio of 20.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson et al. (US 5,376,442).

Davidson et al. discloses a ceramic membrane formed by sintering a mixture of powders. See the paragraph bridging col's 2 and 3. A fine powder fraction has an average particle size of less than 100 nm, and a course powder fraction has an average particle size of 1-10 μm . Id. The course fraction is contained in an amount of 75-90 wt% with the remainder being the fine fraction. Id. The fine powder fraction has a size that is no more than 0.1 times the size of the course fraction. Id. In other words, the average particle size of the fine fraction is less than 0.1 times the average size of the course fraction, or the ratio of the average size of the course fraction to the fine fraction is at least 10.

Each of the ranges recited in Davidson et al. overlap the range recited in claim 30. Overlapping ranges have been held to establish *prima face* obviousness. MPEP 2144.05.

Response to Arguments

Applicant's arguments filed April 21, 2006 have been fully considered but they are not persuasive.

Rejection over Angeletakis et al. (US 2002/0193462)

Applicants argue that the present claims are directed to a ceramic material, whereas the '462 publication relates to a composite material containing a resin and filler particles. This argument is not deemed persuasive. Instant claim 30 recites "a material comprising a ceramic formed from a bimodal oxide powder...." The term "ceramic" appears to be the issue. Applicants seem to argue that the term ceramic means a formed and sintered material. The examiner disagrees with this characterization. During examination, words and phrases are given their broadest reasonable interpretation. It is the examiner's position that the term "ceramic" is not limited to formed and sintered materials but encompasses other forms of ceramics such as particles as suggested by the reference.

Rejection over Davidson et al. (US 5,376,442)

Applicants argue that Davidson et al. does not suggest the presently claimed ratio of large particles to small particles. As noted above, Davidson et al. discloses that the small particles are not greater than 0.1 times the size of large particles. Stated in the opposite manner, the large particles must be greater than 10 times the size of the small particles. This range overlaps the presently claimed range.

Applicants assert various improved properties associated with the claimed ratio of large particles to small particles. The examiner reads this as an assertion of unexpected results associated with the claimed range. However, arguments cannot take the place of evidence where evidence is necessary. MPEP 2145 I. And, there is not data of record establishing unexpected results associated with the claimed range.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

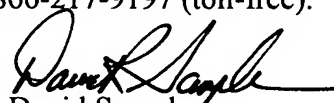
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (571)272-1376. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (572)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "David Sample", written over the printed name.

David Sample
Primary Examiner
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